

ABSTRACT

A valve assembly comprised of a valve body, a piston, a modulating plug, a valve cover adjoining the valve body, and a throttling member. The valve body has an inlet and outlet port, a partition with a valve seat separating the valve body into a first and second flow passage. The piston has a throughbore including an orifice, reciprocally mounted in the valve body and movable between a first and second position. The modulating plug, in abutting contact with the piston and reciprocally mounted in the valve body, gradually moves between an open position, permitting a main fluid flow, and a closed position engaging the valve seat, blocking the main fluid flow. The throttling member is adapted to insure a gradual alteration of the cross-section of the orifice upon piston movement. A method of gradually opening the valve assembly modulating plug is also set forth.